

## **STATIONARY SOURCE PERMIT TO OPERATE**

**This permit includes designated equipment subject to  
National Emission Standards for Hazardous Air Pollutants for Source Categories**

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Ludlow Coated Products  
P.O. Box 2002  
Doswell, Virginia 23047  
Registration No.: 52083  
County-Plant ID No.: 085-00205

is authorized to operate

a printing, coating, extruding, and laminating facility

located at

10351 Verdon Road  
Doswell, Virginia 23047

in accordance with the Conditions of this permit.

Approved on **DRAFT**.

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Robert G. Burnley  
Director, Department of Environmental Quality

Permit consists of 9 pages.  
Permit Conditions 1 to 28.

**PERMIT CONDITIONS** - the regulatory reference or authority for each condition is listed in parentheses ( ) after each condition.

## **APPLICATION**

1. Except as specified in this permit, the permitted facility is to be operated as represented in the permit application dated November 30, 2004, including amendment information dated December 17, 2004 December 21, 2004, December 29, 2004, December 30, 2004, and February 3, 2005. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.  
(9 VAC 5-80-830)

## **PROCESS REQUIREMENTS**

2. **Equipment List** - Equipment to be operated at this facility consists of:

Unit Reference Number	Equipment / Operation Description	Maximum Rated Capacity	Building
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### **Coater:**

Coater	Coater (coating)	1,650 lbs/hr	Bldg #1
	Coater (printing)	224 lbs/hr	
	Coater (adhesive)	1,035 lbs/hr	

### **Extruders:**

Ext 1	Extruder 1 (extruding)	1,500 lbs/hr	Bldg #1
	Extruder 1 (coating)	414 lbs/hr	
	Extruder 1 (printing)	414 lbs/hr	
	Extruder 1 (adhesive)	1,642 lbs/hr	
Ext 2	Extruder 2 (extruding)	1,500 lbs/hr	Bldg #1

### **Laminators:**

Lam 1	Laminator (laminating PVA)	30,000 lbs/hr	Bldg #3
	Laminator (coating)	570 lbs/hr	
	Laminator (printing-inkjet)	285 lbs/hr	
	Laminator (printing-flexo)	228 lbs/hr	
Lam 2	Laminator (laminating PVA)	30,000 lbs/hr	Bldg #3
R to R Lam	Roll to Roll Laminator (laminating PVA)	4,000 lbs/hr	Bldg #3
	Roll to Roll Laminator (printing)	343 lbs/hr	
Lam 14	Laminator (laminating PVA)	14,000 lbs/hr	Bldg #3
	Laminator (coating)	300 lbs/hr	
	Laminator (printing-inkjet)	150 lbs/hr	
	Laminator (printing-flexo)	120 lbs/hr	

**\*\*Note:** The Coater, Ext 1, Lam 1, R to R Lam, and Lam 14 are all applicable to NESHA, Subpart KK as area sources

Unit Reference Number	Equipment / Operation Description	Maximum Rated Capacity	Building
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**Boilers/Burner:**

B1	Boiler (LPG)	4.18 MMBtu/hr	Bldg #3
B2	Boiler (LPG)	1.0 MMBtu/hr	Bldg #3
B3	Boiler (LPG)	0.8 MMBtu/hr	Bldg #3
FB	Flynn Burner (LPG)	0.24 MMBtu/hr	Bldg #1

**Ovens:**

Oven 1	Oven (LPG)	0.275 MMBtu/hr	Bldg #1
Oven 2	Oven (LPG)	0.275 MMBtu/hr	Bldg #1
Oven 3	Oven (LPG)	2.0 MMBtu/hr	Bldg #1

**Heaters:**

SH1-30	30 Reverber-Ray Radiant Space Heaters (LPG)	4.8 MMBtu/hr (total)	Bldg #1-3
FH1-19	19 Forced-Air, Direct-Fired Heaters (LPG)	0.4 MMBtu/hr (total)	Bldg #1-3

**Emergency Generator:**

EG 1	Emergency Generator (Diesel)	125 KW	Pump House
FP 1	Fire Pump (Electric)	100 hp	Pump House

**Tank:**

AST 1	Above Ground Storage Tank (LPG)	30,000 gallons	Bldg #1
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**Cyclones:**

CYC1, 2, 3	Cyclones 1, 2, 3	12 tons/day (total)	Bldg #1 & #3
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**Silos:**

S1	Silo 1 (storage and conveying)	140,000 lbs/day	Bldg #1
S2	Silo 2 (storage and conveying)	140,000 lbs/day	Bldg #1
S3	Silo 3 (storage and conveying)	170,000 lbs/day	Bldg #1
S4	Silo 4 (storage and conveying)	210,000 lbs/day	Bldg #3

**Glue Stations:**

GS1	Glue Station 1	3.0 lbs/10 <sup>3</sup> ft <sup>2</sup>	Bldg #3
GS2	Glue Station 2	3.0 lbs/10 <sup>3</sup> ft <sup>2</sup>	Bldg #3
GS3	Glue Station 3	3.0 lbs/10 <sup>3</sup> ft <sup>2</sup>	Bldg #3

**Printer:**

USP	Universal Slotter Printer	1.0 lbs/10 <sup>3</sup> ft <sup>2</sup>	Bldg #3
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Unit Reference Number	Equipment / Operation Description	Maximum Rated Capacity	Building
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**Parts Cleaners:**

PC1-3	Non-Halogenated Parts Cleaners	600 lbs/yr (total)	Bldg #1 & #3
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3. **VOC Emission Controls** - Volatile organic compound emissions controls from cleanup, washup, and disposal shall include the following, or equivalent, as a minimum:
  - a. VOC shall not be intentionally spilled, discarded to sewers, stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing emissions.
  - b. All VOC containing receptacles shall be closed at all times except during loading and unloading.

(9 VAC 5-50-260, 9 VAC 5-50-20F, and 9 VAC 5-80-850 F)

**OPERATING/EMISSION LIMITATIONS**

4. **Operating Hours** - The emergency generator (Ref. No. EG 1) shall not operate more than 500 hours per year, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-850)
5. **Methanol Throughput** - The throughput of methanol shall not exceed 9.9 tons per year, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-850)
6. **VOC Throughput** - The throughput of VOC to the coater, extruders, and laminators as applied shall not exceed the limitations established in the table below. Annual throughput limitations (tons/yr) shall be calculated monthly as the sum of each consecutive 12 month period.

<b><u>Materials</u></b>	<b><u>VOC Throughput</u></b>	<b><u>Max. VOC Content</u></b>
PVA Adhesive	9.5 tons/yr	2.0 % weight
Coatings	53.7 tons/yr	2.5 lb VOC/gal
Non-Inkjet Inks	5.8 tons/yr	2.5 lb VOC/gal
Inkjet Inks	1.4 tons/yr	2.5 lb VOC/gal
Water Based Adhesives	24.1 tons/yr	2.5 lb VOC/gal

(9 VAC 5-80-850)

7. **Throughput** - The throughput of Michelman CLG2100 shall not exceed 250 tons per year and 0.0643% formaldehyde by weight, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-850)
8. **Throughput** - The throughput of Progressive V-667 shall not exceed 100 tons per year and 0.465% methanol by weight, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-850)
9. **Fuel** - The approved fuel for the boilers (Ref. No. B1, B2, and B3), Flynn burner (Ref. No. FB), ovens (Ref. No. Oven 1-3), and heaters (Ref. No. SH1-30 and FH1-19) is liquefied petroleum gas (LPG). A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-850)

10. **Fuel** - The approved fuel for the emergency generator (Ref. No. EG 1) is diesel. A change in the fuel may require a permit to modify and operate.  
(9 VAC 5-80-850)
11. **Fuel Throughput** - The boilers, Flynn burner, ovens, and heaters shall consume no more than 1,300,865 gallons of liquefied petroleum gas (LPG) per year, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-850)
12. **Fuel** - The LPG shall meet the specifications below:
- LPG, including butane and **propane**, which meets ASTM specification D1835
- (9 VAC 5-80-850)
13. **Emission Limits** - Emissions from the operation of the boilers (Ref. No. B1, B2, and B3), Flynn burner (Ref. No. FB), ovens (Ref. No. Oven 1-3), and heaters (Ref. No. SH1-30 and FH1-19) shall not exceed the limits specified below:

Nitrogen Oxides (as NO <sub>2</sub> )	2.8 lbs/hr	12.4 tons/yr
Carbon Monoxide	0.5 lbs/hr	2.1 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 9 and 11.  
(9 VAC 5-80-850)

14. **Plantwide Emission Limits** - Total emissions from the printing, coating, extruding, and laminating facility shall not exceed the limits specified below:

Particulate Matter	3.7 lbs/hr	15.4 tons/yr
Nitrogen Oxides (as NO <sub>2</sub> )	4.6 lbs/hr	12.8 tons/yr
Carbon Monoxide	0.9 lbs/hr	2.2 tons/yr
Volatile Organic Compounds	22.3 lbs/hr	97.2 tons/yr
Methanol	2.4 lbs/hr	9.9 tons/yr

These emission are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition numbers 2, 4, 5, 6, 7, 8, 9, 10, 11, and 13.  
(9 VAC 5-80-850)

15. **Toxics, Hazardous Air Pollutants** - As of the date of this permit, the permittee is limited to use of the following toxic compounds or hazardous air pollutants (HAPs) in coatings, adhesives, and inks for the printing, coating, extruding, and laminating processes:

<u>Volatile HAPs</u>	<u>CAS Number</u>
Methanol	67-56-1
Ethyl Acrylate	140-88-5

<u><b>Volatile HAPs</b></u>	<u><b>CAS Number</b></u>
Styrene	100-42-5
Diethanolamine	111-42-2
1,4-Dioxane	123-91-1
Ethylene Oxide	75-21-8
1,3-Butadiene	106-99-0
Formaldehyde	50-00-0
Vinyl Acetate	108-05-4

The permittee may use additional HAPs (listed in Attachment A) in the printing, coating, extruding, and laminating processes under 9 VAC 5-50-160 D without obtaining a new permit provided the following conditions are met:

- a. Notification shall be given to the Director, Piedmont Region. Such notification shall be made within fifteen (15) days after the use of additional toxic compounds or HAPs, and shall include identification of the HAP, the date the HAP was first used, and the anticipated maximum throughput of that compound in lbs/hr and tons/yr. Additional details of the notification should be arranged with the Director, Piedmont Region.
- b. The potential to emit the additional toxic pollutant from the entire plant shall be less than the exempt emission rate for that pollutant, calculated using the definition of "potential to emit" in 9 VAC 5-60-310, the procedures and formula of 9 VAC 5-60-300 C.1 and Threshold Limit Values (TLVs) approved by the Department.
- c. The permittee shall not use any HAP, which would make the facility subject to federal emission standards in 40 CFR 61 or 40 CFR 63.
- d. If a permit is required, failure to obtain the permit prior to the change in process formulation or the use of any additional HAP may result in enforcement action.

(9 VAC 5-80-850)

16. **Emission Limits** - Hazardous air pollutant (HAP) emissions, as defined by §112(b) of the Clean Air Act, from the printing, coating, extruding, and laminating facility shall not exceed **10 tons** per year of any individual HAP or **25 tons** per year of any combination, calculated monthly as the sum of each consecutive 12 month period.  
(9 VAC 5-80-850)
17. **Visible Emission Limit** - Visible emissions from the printing, coating, extruding, and laminating facility shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during malfunction.  
(9 VAC 5-80-850)
18. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the NESHAP equipment as described in Condition 2 shall be operated in compliance with the requirements of 40 CFR 63, Subpart KK as an **area source**. The facility will comply with the requirements of Subpart KK as an area source by complying with Conditions 19d and 19g.  
(9 VAC 5-60-60 and 9 VAC 5-60-70)

## **RECORDS**

19. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:

- a. Annual consumption of liquefied petroleum gas (LPG), calculated monthly as the sum of each consecutive 12 month period.
- b. Annual throughput of methanol, calculated monthly as the sum of each consecutive 12 month period.
- c. Annual hours of operation of the emergency generator (Ref. No. EG 1), calculated monthly as the sum of each consecutive 12 month period.
- d. Material Safety Data Sheets (MSDS) or other vendor information showing VOC content and HAP content for each coating, adhesive, and ink used.
- e. Monthly and annual throughput in tons of **each** coating, adhesive, and ink, used in the printing, coating, extruding, and laminating processes. Annual throughputs shall be calculated monthly as the sum of each consecutive 12 month period.
- f. Monthly and annual **VOC** throughput in tons of **each** coating, adhesive, and ink, used in the printing, coating, extruding, and laminating processes. Annual throughputs shall be calculated monthly as the sum of each consecutive 12 month period.
- g. Monthly and annual emissions, using a mass balance approach, to verify compliance with the individual and total HAP emission limitations in Conditions 5 and 16. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period.

These records shall be available for inspection by the DEQ and shall be current for the most recent five years.  
(9 VAC 5-80-900)

20. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. Test ports shall be provided when requested at the appropriate locations.  
(9 VAC 5-80-930)

#### **GENERAL CONDITIONS**

21. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:
- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;
  - b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
  - c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
  - d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.  
(9 VAC 5-170-130)

22. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Piedmont Region of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within two weeks of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify Director, Piedmont Region in writing.  
(9 VAC 5-20-180 C)

23. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.  
(9 VAC 5-20-180 I)

24. **Maintenance/Operating Procedures** - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.
- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.  
(9 VAC 5-50-20 E)

25. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
- b. Fails to comply with the terms or conditions of this permit;
- c. Fails to comply with any emission standards applicable to the equipment listed in Condition 2;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;
- f. Fails to comply with the applicable provisions of Articles 6, 8 and 9 of 9 VAC 5 Chapter 80.  
(9 VAC 5-80-1010)



26. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Piedmont Region of the change of ownership within 30 days of the transfer.  
(9 VAC 5-80-940)
27. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.  
(9 VAC 5-80-900)
28. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.  
(9 VAC 5-80-860 D)

